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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,330	08/05/2003	Barbara J. Marshik-Gcurts	12258-030001	8117

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FISH & RICHARDSON PC  
P.O. BOX 1022  
MINNEAPOLIS, MN 55440-1022

EXAMINER
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CATTUNGAL, SANJAY

ART UNIT	PAPER NUMBER
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3768

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
3 MONTHS	01/30/2007	PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

## Office Action Summary

Application No.

10/635,330

Applicant(s)

MARSHIK-GEURTS ET AL.

Examiner

Sanjay Cattungal

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 13 November 2006.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 59-63 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 59-63 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 05 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date <u>04/07/04, 02/06/04</u> | 6) <input type="checkbox"/> Other: _____  |

## DETAILED ACTION

### *Response to Arguments*

Applicant's arguments with respect to claims 59-63 have been considered but are moot in view of the new ground(s) of rejection.

Applicant argues that the Fantini reference uses a threshold and points out

However, in fact, *Fantini* does use a threshold. As discussed in connection with FIG 5: "[I]n FIG. 5, areas with positive  $N^*$  are set to white (by setting a threshold at  $N^*=0$ ), areas with negative  $N^*$  ... are displayed in gray-scale, and the region external to the breast is set to black."<sup>2</sup>

However it should be noted that Fantini is just using  $N=0$  to assign values so that the data is represented in a gray-scale. Further interpretation of data is done using the gray-scale and no threshold is used to characterize the tissue.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 59-63 are rejected under 35 U.S.C. 103(a) as being unpatentable over U. S. Patent No. 5,441,053 to Lodder ("Lodder") in view of US Publication No. 2006/0106293, US Application No. 10/507,336 to Fantini. ("Fantini")
2. Regarding **Claims 59 and 63**, Lodder teaches a method of displaying spectral data corresponding to a tissue, the method comprising: scanning a

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series of points within the tissue with infrared radiation (Abstract); detecting radiation reflected from the tissue (Abstract); processing the detected radiation to generate an image of the scanned tissue (Abstract)

1. Lodder does not expressly teach converting the set of numbers into a continuous grade output that characterizes the tissue without a threshold.
2. Fantini teaches converting the set of numbers into a continuous grade output that characterizes the tissue without a threshold. (Fig. 3-5; and Fig. 24 A1, A2, B1 and B2)
3. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Lodder with a setup such that the data is converted into a continuous grade output as described by Fantini since a gray-scale setup would make data interpretation more accurate as a skilled person would be better able to characterize tissue from a gray-scale data.
4. Regarding **Claim 61**, Fantini teaches that the continuous grading is represented by a gray scale or different tones, pitches, or volumes of sound. (Fig. 3-5; and Fig. 24 A1, A2, B1 and B2)
5. Regarding **Claim 62**, Lodder teaches that the radiation is near-infrared radiation. (Abstract)
6. Regarding **Claim 60**, Fantini teaches all of the above claimed limitations but does not expressly teach that the continuous grading is represented by false color scale.
7. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Fantini such that the continuous grading is represented by

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a false color scale, since Fantini discloses using gray scale grading technique, and false color scale and gray scale are very well known grading techniques which have been around for many years.

***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sanjay Cattungal whose telephone number is (571)272-1306. The examiner can normally be reached on 9:30 - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Eleni Mantis-Mercader can be reached on (571)272-4740. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300. Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

SPC

  
ELENI MANTIS MERCADER  
SUPERVISORY PATENT EXAMINER